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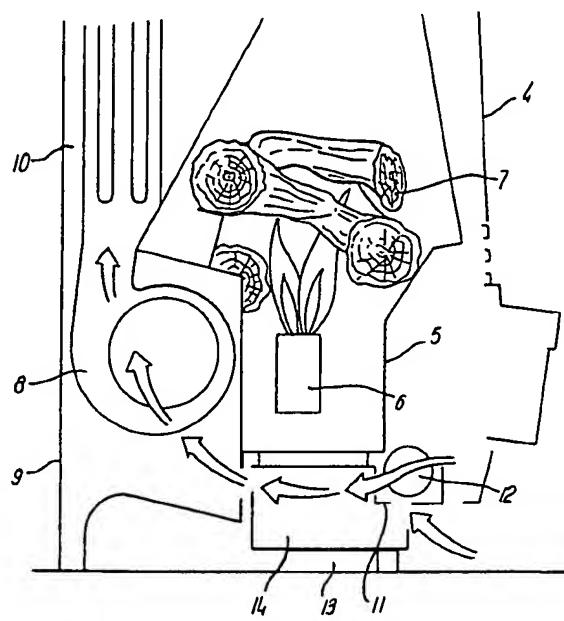
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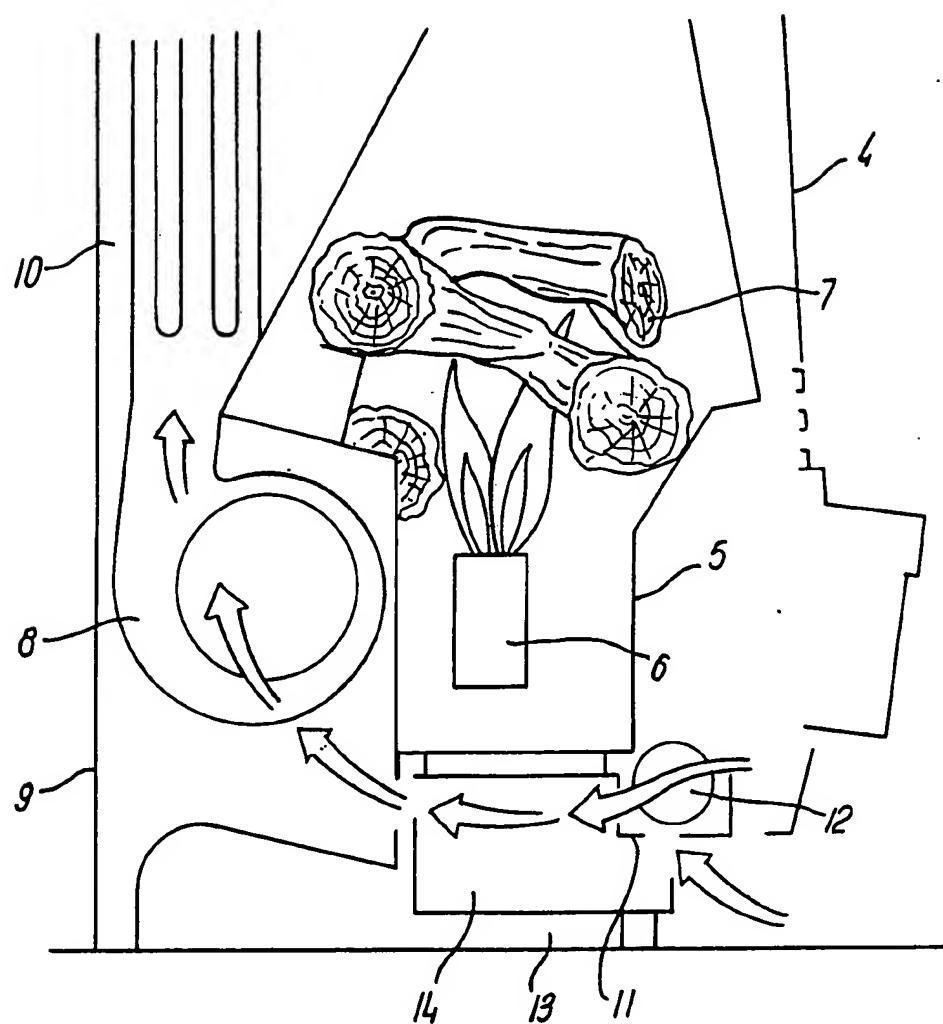
(54) Simulated solid fuel gas fires

(57) A gas fired heating appliance incorporates simulated fuel elements 7 and a lamp or lamps 12 for illuminating the fuel elements. A fan 8 is provided for generating a flow of air over the lamp or lamps to provide a cooling effect. Advantageously other electrical components are housed at 14 in the air flow path so as to be subjected to cooling during operation. The fan may direct the cooling air to a heat exchanger 10 for heat exchange with products of combustion from the burner of the appliance.



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Space Heater

This invention relates to space heaters.

Domestic gas fires of the live fuel effect type, that is which incorporate simulated fuel elements and means for creating the illusion that the fuel elements are burning as in a solid fuel fire, commonly incorporate electric bulbs providing illumination as part of the live fuel effect. Such constructions give rise to problems arising from the high temperatures encountered in gas fires with the result that the bulbs frequently require to be positioned remote from the area which they are intended to illuminate thereby reducing their effectiveness.

It is an object of the present invention to obviate or mitigate this disadvantage.

The invention provides a gas fired heating appliance incorporating simulated fuel elements, means for illuminating such elements and means for generating a flow of air over the illuminating means whereby to provide a cooling effect.

In a preferred arrangement the simulated fuel elements are disposed in a lower forward region of the appliance, said illuminating means being disposed beneath and forwardly of said elements in a passageway through which air may flow for cooling purposes.

Advantageously the appliance incorporates a power driven fan operable to draw cooling air over said illuminating means. The fan may also serve to provide air to a heat exchanger for cooling purposes.

Advantageously the fire incorporates other electrical components for ignition and related purposes, which electrical components are located in the path of flow of said cooling air. Advantageously the electrical components are incorporated in a control box disposed in said passageway rearwardly of said illuminating means.

An embodiment of the invention will now be described, by way of example only, with reference to the accompanying drawing which is a diagrammatic cross-section through a gas-fired heating appliance according to the invention.

Referring to the drawing, the appliance comprises an outer casing 4 the lower portion only of which is shown in the drawing and which houses a combustion

chamber 5 incorporating a gas burner 6 above and forwardly of which are located simulated fuel elements 7. A fan 8 is incorporated in a housing 9 to the rear of the combustion chamber 5 and serves to direct air supplied to the fan upwardly over a heat exchanger 10 for heat exchange with products of combustion emitted from the burner.

A lamp housing 11 is mounted beneath and forwardly of the combustion chamber 5 and incorporates a lamp 12 adapted to cast light upwardly to illuminate the fuel elements from below through an opening (not shown) in the forward region of the combustion chamber 5. The lamp housing 11 is located in a passage 13 extending from the lower forward region of the casing 4 beneath the combustion chamber 5 and into the fan housing 9. A control box 14 containing electrical components associated with the lamp 12, with the fan 8 and with an electrical ignition system (not shown) associated with the burner 6, is also located in the passage 13.

During operation of the appliance the lamp 12 is illuminated to throw light upwardly, on to the fuel elements 7, and the fan 8 operates to draw air from the front of the appliance over the lamp housing 11 and control box 14 into the fan housing 9. The air is discharged from the fan over the heat exchanger 10.

Thus the incoming air has a cooling effect on the bulb 12 and on the electrical components housed in the housing 14 before being discharged over the heat exchanger 10 to withdraw heat from the products of combustion emitted from the fire. The cooling effect of the incoming air maintains the bulb 12 at a safe operating temperature thereby avoiding breakdowns and replacement which has been a common problem with appliances proposed hitherto. The components within the housing 14 are also cooled thereby reducing the likelihood of malfunction of the electrical components incorporated in the fire through overheating.

Various modifications may be made without departing from the invention. For example the position of the bulb housing, electrical control box and fan may be altered dependent on variations in fire construction, and in some cases the cooling air may be directed only over the bulb housing and not the electrical control box. Other means may also be provided for inducing flow of air, for example by convection in appliances where no fan is incorporated. The bulb housing may incorporate one or more bulbs and may be positioned in various locations relative to the simulated fuel elements dependent on requirements. Moreover while in the illustrated appliance the fuel elements comprise imitation logs they may comprise imitation coal or other fuel.

Whilst endeavouring in the foregoing specification to draw attention to those features of the invention believed to be of particular importance it should be understood that the Applicant claims protection in respect of any patentable feature or combination of features hereinbefore referred to and/or shown in the drawings whether or not particular emphasis has been placed thereon.

Claims

1. A gas fired heating appliance incorporating simulated fuel elements, means for illuminating such elements and means for generating a flow of air over the illuminating means whereby to provide a cooling effect.
2. An appliance according to claim 1 wherein said simulated fuel elements are disposed in a lower forward region of the appliance, said illuminating means being disposed beneath and forwardly of said elements in a passageway through which air may flow for cooling purposes.
3. An appliance according to 1 or 2 incorporating a power driven fan operable to draw cooling air over said illuminating means.
4. An appliance according to claim 3 including a heat exchanger through which air is directed by said fan for heat exchange with products of combustion from a gas burner incorporated in the appliance.
5. An appliance according to any preceding claim in which electrical components other than said illuminating

means are located in the path of flow of said cooling air.

6 An appliance according to claim 5 wherein said other components include electrical components for ignition and components associated with said illuminating means and with said fan, when provided.

7. An appliance according to claim 5 or 6 wherein said electrical components are incorporated in a control box disposed in said passageway rearwardly of said illuminating means.

8. A gas fired heating appliance substantially as hereinbefore described with reference to the accompanying drawing.

9. Any novel subject matter or combination including novel subject matter herein disclosed in the foregoing specification or claims and/or shown in the drawings, whether or not within the scope of or relating to the same invention as any of the preceding claims.